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MEMORANDUM FOR: Director of Central Intelligence
Deputy Director of Central Intelligence

FROM: [redacted] 25X1
Executive Director

SUBJECT: Status Report on the Information Systems Board [redacted] 25X1

1. One year ago this month we inaugurated the Information Systems Board (ISB) in an effort to bring greater coordination and direction to the Agency's increasingly costly and complicated information handling programs. The Board is supported by six working groups. [redacted] 25X1

2. After a slow beginning to get the working groups formed, chartered and functioning, I am reasonably pleased with the results. Four of the six groups -- Artificial Intelligence Applications, Computer Security, Information Services Planning, and Workstation Environment -- have completed their first assignments; the remaining two -- Executive Information System and Requirements and Technology Acquisition -- will present their conclusions to the Board in July and August. Several thorny information handling policy issues have been resolved or are near resolution. Significantly, the Board members perceive this structure to be beneficial and all the components involved, with only minor lapses, have been cooperative. [redacted] 25X1

3. Concerned that the Agency was headed in two expensive directions at once -- the VM* system (with Delta Data terminals for data processing) and the Wang system (with Wang terminals for word processing) -- the Board tasked the Workstation Environment Working Group to prepare options for merging these two into a single system. The Working Group's interim report was excellent, and the Board endorsed its three recommendations. The first two recommendations -- linking Wang and VM to permit transfer of files and developing word processing on VM -- have been achieved. The third and most revolutionary recommendation -- buying personal computers (PCs) to serve as both word and data processing terminals -- stimulated considerable discussion among

*Abbreviation for DDA/ODP's primary timesharing system called Virtual Machine.

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Board members who finally agreed that further requirements and cost/benefit assessments were needed before acquiring PCs in quantity. The decision was made to take a fresh look at the compatability of PCs with our present system, and A. D. Little was selected to do this. Based on the study, scheduled for completion later this year, the Board will determine if PCs are a viable short-term solution for CIA. (NSA has embarked on an ADP modernization effort which will rely heavily on the use of PCs, and a recent DI modernization task force recommended widespread use of PCs in that Directorate.) 25X1

4. The Computer Security Working Group was charged with reviewing Agency security policies in the context of the burgeoning use of electronically stored and transmitted information. The Working Group concluded early on that separate policies based on the paper or electronic format of the data are inadvisable. It drafted an "Inter-Agency Data Sharing Policy" to govern all information handling and suggested additional language to DCID 1/7 to permit a more flexible response to the information needs of the US military during a national security crisis. The Board will deliberate these options at its next meeting on 29 June and will make a recommendation to the EXCOM. After EXCOM approval, the recommendation will be forwarded through Community channels for your approval. 25X1

5. The Working Group's next task is to prepare, for review by EXCOM in November, an investment strategy that will project our electronic security problems into the next decade and recommend a phased plan to solve them. The strategy will build on Ruth Davis's COMPUSEC project. Once it has been approved by the Board and EXCOM, as called for in the 1984 Addendum to the Strategic Plan, the Computer Security Working Group could be disbanded. The Director of Security has been pleased with the Group's efforts, however, and has already asked the members to reform as an Office of Security advisory group. 25X1

6. The Information Services Planning Working Group tackled another thorny problem: i.e., whether and how to plan for Agency-wide, long-range information handling needs, both automated and not, and how to wed such planning to the budget cycle and program implementation. The Group's report to the Board offered four recommendations; the Board approved the first three:

-- establish the Executive Director as the senior Agency official responsible for information systems planning,

-- continue the work of the Information Systems Board, and

-- require each directorate to develop an information systems plan and participate in the creation of an Agency-wide plan.

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The Board did not achieve consensus on the fourth recommendation:

-- create a three to five person full-time staff under the Executive Director responsible for information services planning. (I opposed this.)

I have asked the Deputies to vote their preference for planning options so that I may determine the tasking for the first Agency-wide information services plan in time for the Board meeting in July. Meanwhile, the Working Group is preparing guidelines for the directorate plans to be presented at that meeting. Following completion of this effort, the Information Services Planning Working Group will be disbanded. 25X1

7. Many computer authorities are convinced that, in future years, the most significant breakthroughs in information handling will come from the highly sophisticated and expensive field of Artificial Intelligence (AI). This is particularly true in several areas of special interest to CIA, e.g., image understanding, machine-assisted translation and, most importantly, the reduction and distillation of vast amounts of raw data. The Artificial Intelligence Applications Working Group has just completed its first assessment of the state of the AI art, and the Board has approved the group's ten recommendations which generally propose an increased but cautious Agency commitment to AI, enhanced training in AI, and improved coordination between CIA and others in the Defense and Intelligence Communities interested in these problems. This Working Group is now writing investment strategies -- which should take advantage of AI efforts underway elsewhere -- in the areas of special interest mentioned above. This Group will remain the primary mechanism for coordinating AI projects within the Agency and for informing the Board and other managers of AI projects and progress outside CIA. 25X1

8. Several Agency components, most notably the DS&T but increasingly the DI and DA as well, have expressed interest in information systems for managers. The Executive Information Systems Working Group is studying the requirements (including security) and options for an Agency-wide system so that we may avoid having a confusion of incompatible hardware and architectures as each interested office installs a system on its own. In addition to their survey of Agency managers, several members of the Group visited industries on the West Coast, including Hughes Aircraft where every executive has a terminal on his or her desk and the Xerox Palo Alto Research Center which has done pioneering work in the "Office of the Future." In March, the Group initially concluded that Agency managers needed to exchange messages among themselves (electronic mail), rapidly schedule meetings (automated calendar), and easily obtain access to, analyze and format data located in the Agency's personnel and financial data bases (data processing and graphics). The Working Group's final report, including a cost analysis of alternative systems, will be presented to the Board in July. 25X1

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9. Finally, the Requirements and Technology Acquisition Working Group is completing its assessment of the Agency's system for defining requirements. The Group's recommendations apparently will include proposals to tighten the whole requirements process and give the Directorate ADP control officers increased responsibility. These recommendations are to be considered at the August Board meeting [redacted] 25X1

10. Last fall, the Board hosted the visit to the Agency of James Martin, a man acknowledged as the computer industry's foremost authority on the future of information handling. In a series of well-attended and well-received lectures in the auditorium, Dr. Martin discussed:

- Computer Security: "Industry is not willing to pay for secure systems. If the Intelligence Community wants computer security, the Intelligence Community will have to pay for it."

- Japan's Fifth Generation Computer Project: "Even if the Japanese initially produce a slightly faster computer, the US is still the software leader of the world. And software, particularly Artificial Intelligence applications, is what will count in the long run."

- Future Trends in Communications and ADP: "The most important trend in the coming decade will be the fusion of computing with communications -- networking -- and there are precious few who understand both the ADP and communications sides of the same coin."

- Strategic Planning for Automated Data Handling: "Virtually all data processing departments have huge applications backlogs. Over the next decade, we must drastically increase the productivity of programmers by a factor of 1,000 percent. New, more productive software development techniques are already available, but the programming techniques of the 1960s and 1970s die hard." [redacted] 25X1

11. The Agency still has many issues to confront and policies to set before we can be confident that management, not technology, is in the information handling driver's seat. But manage we must because a staggering amount of resources is involved -- over 25 percent of the 1986 budget and growing at an annual rate of nearly 43 percent from 1984-1986. Our future effectiveness as an Agency depends on our ability to make the right decisions about critically needed information handling capabilities. Two other imperatives also drive the Board's efforts. As the users of information systems become more computer literate, they increasingly demand and should be given a role in decisions affecting their information handling needs. Increasingly too, we need to encourage our ADP and communications experts to keep current on technical advances, remain flexible in

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approaching these issues and, above all, strive for creative solutions. 25X1

12. According to Richard Nolan writing in the July 1982 issue of the Harvard Business Review, we are on the right track with a mechanism like the Information Systems Board to tackle these crucial issues. I am not lulled into thinking the Board alone will solve our problems. I do believe that we can solve them with the continuing enthusiasm and determination of all involved. 25X1

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[redacted] (21 June 1984)

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